

template. The primers are instead designed so that each one has a 3' end of the primer which is toward either the 5' or 3' end of the polynucleotide. This means that the forward primer will typically be towards the 3' end of the molecule and the reverse primer will be towards the 5' end of the molecule. For example, if a known sequence comprises 5'-ATATATATGCGCGCGC-3' a forward primer would be 5'-CGCGCGCG-3' to hybridize with the 3' end of the molecule and the second or reverse primer would be 5'-ATATATAT-3' to hybridize with the 5' end of the molecule and having its 3' end towards the 5' of the target gene. See Figure 1. Design of primers for amplification and extension reactions are commonly known in the art of PCR amplification and the remainder of primer design is standard. A brief summary of oligonucleotide primer design is disclosed herein. In addition a discussion of primer design can be located in "Molecular biology Techniques Manual" third edition CRC Press, Editors, Coyne et al. In addition, there are a number of publically and commercially available computer programs to aid in design of primers including, BLAST, PrimerGen, Primer (Stanford), Amplify, Primer Design 1.04, PC-Rare, CODEHOP, Primer 3, and Net Primer (Premier (Premier Biosoft Int'l)).--

In the Claims

Please cancel claims 22 and 23.

Please amend claims 12-13 and 20-²¹23 as follows:

12. (Amended)

A method for amplifying a nucleic acid molecule including the 5' and 3' ends comprising:
circularizing said nucleic acid molecule;
contacting said nucleic acid with first and second sequence specific primers; and
introducing a polymerase and a supply of nucleotide bases to said circularized nucleic acid molecule so that an amplification reaction occurs; wherein said region of said nucleic acid molecule outside of said first and second primers including the 3' and 5' ends of said molecule is amplified.

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